

-2-

Amendment to Specification

Please amend paragraphs [0007] and [0008] as follows:

[0007] Referring now to Fig. 1 a slower rate or "slow" video signal is input to a frame rate converter 12 that up-samples the slower rate video signal to a desired higher rate video signal. The higher rate video signal is then input to a three-dimensional (3D) human vision model (HVM) adaptive filter 14, such as that described in co-pending U.S. Patent Application Serial No. ~~69/856,775~~ 6,907,143 filed by the present inventor on May 16, 2001 entitled "Adaptive Spatio-Temporal Filter for Human Vision Model Systems." The output from the HVM adaptive filter 14 is a temporally smooth, not necessarily blurred, interpolated video signal at the higher rate without any direct current (DC) component. The output from the HVM adaptive filter 14 together with the up-sampled slower rate video signal from the frame rate converter 12 are input to a DC restore circuit 16, as the HVM adaptive filter eliminates the DC component of the up-sampled slower rate video signal. The DC restore circuit 16 determines the DC level from the up-sampled slower rate video signal and adds that to the smooth interpolated video signal to produce the final output "smooth" interpolated video signal. In some instances the DC restore circuit 16 may be eliminated. Otherwise the DC level added to the smooth interpolated video signal by the DC restore circuit 16 may be a constant, may be based on average picture level (APL) from the up-sampled slower rate video signal, or may be determined in any other way that is well known in the art.

-3-

[0008] The HVM adaptive filter 14 is a plurality of filters composed of a common building block, as shown in Fig. 2 of referenced U.S. Patent Application Serial No. ~~09/658,775~~ 6,907,143. This is a recursive filter architecture where the output of the filter is multiplied by a constant less than one, delayed and fed back to the input for combining with the next frame in sequence. The recursive nature of the HVM adaptive filter results in the interpolation of the up-sampled slower rate video signal into the smooth interpolated video signal.